

Carnegie-Illinois Steel Corporation

General Offices: Pittsburgh and Chicago

District Offices

BIRMINGHAM	CLEVELAND	INDIANAPOLIS	PITTSBURGH
BOSTON	DENVER	MILWAUKEE	ST. LOUIS
CHICAGO	DETROIT	NEW YORK	ST. PAUL
CINCINNATI	HOUSTON	PHILADELPHIA	WASHINGTON

COLUMBIA STEEL COMPANY, SAN FRANCISCO, Pacific Coast Distributors
UNITED STATES STEEL PRODUCTS COMPANY, NEW YORK, Export Distributors

U·S·S CORROSION-RESISTING, COPPER-STEEL SHEETS

The practical, low cost way to fight rust in ducts and air conditioning equipment is to use copper steel. Numerous tests and installations prove that a small amount of copper added to steel more than doubles its resistance to atmospheric corrosion. The cost of this double protection is so small in comparison to the value of the increased life that U·S·S Copper-Steel should be definitely considered for all your jobs.

Even when the base metal is galvanized or painted, copper-steel is worthwhile because surface coatings may become damaged. When copper-steel is used, the exposed metal still has excellent resistance to corrosion.

U·S·S Copper-Steel Black and Galvanized Sheets are saving thousands of dollars yearly in the ceaseless fight against rust. They give maximum protection per dollar of cost and are being used in ever-increasing volume by heating, ventilating and air conditioning engineers, architects and contractors.

Gauges of Steel Sheets Used for Duct Construction

HEATING AND VENTILATING				Planing Mill and Other Exhaust Systems	
Round Ducts		Rectangular Ducts			
Diam., Inches	Gauge	Width, Inches	Gauge	Diam., Inches	Gauge
6 to 19	26	4 to 18	26	Up to 8	24
20 to 29	24	19 to 30	24	9 to 14	22
30 to 39	22	31 to 60	22	15 to 20	20
40 to 49	20	61 to 118	20	21 to 30	18
50 and above	18	118 and above	18		

In the above table rectangular ducts are to have cross breaks for the gauges shown, otherwise two gauges heavier should be used. One inch standing seams should be used on widths up to 48 in., 1½ in. seams on widths over 48 in., and for widths over 60 in., the seams should in addition be provided with reinforcing bars or angles.

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U·S·S Black and Galvanized Sheets

Two principal types of black sheets are used by air conditioning engineers. They are U·S·S Hot Rolled and U·S·S Hot Rolled Annealed. These steel sheets may be had in a number of different finishes, suitable for all sorts of forming operations and for painting.

Remember that every kind of U·S·S Black Sheet is available in Copper-Steel Black Sheets for blowers, refrigerator cabinets, dust collectors, tube collectors, fans, ducts and a thousand other specialty products.

Five types of galvanized sheets made by U·S·S Subsidiaries are used extensively in heating and ventilating work. The best types for your particular products or installations may be ascertained by consulting U·S·S engineers. Write the nearest branch office.

International Heating & Ventilating Exposition

THE AIR CONDITIONING EXPOSITION

Permanent Address—Grand Central Palace, New York, N. Y.

EXPOSITIONS HELD

The first in Philadelphia, 1930.
The second in Cleveland, 1932.
The third in New York, 1934.
The fourth in Chicago, 1936.
The fifth in New York, 1938.
Subsequent Expositions will be held on alternate, even numbered years.

These are held coincident with the Annual Meeting of the AMERICAN SOCIETY OF HEATING AND VENTILATING ENGINEERS and are directed by the International Exposition Company, under the auspices of the A.S.H.V.E.

EXHIBITORS

Comprise leading firms in each phase of the industry: number has varied from 150 to 327 exhibitors.

EXHIBITS

These range from and comprise all the types of articles discussed or advertised in this copy of THE A.S.H.V.E. GUIDE.

- The COMBUSTION Group:**
Furnaces, burners (coal, oil and gas), grates, stokers, boilers, radiators (various types), refractories and auxiliaries.
- The OIL BURNER Group:**
Water feeders, water heaters, pumps, traps, valves, piping, fittings, expansion joints, pipe hangers, etc.
- The STEAM HEATING Group:**
Vapor heating and steam specialties.
- The HOT WATER HEATING Group:**
The Air Group:
Warm Air furnaces and stoves, registers and grilles, cooling towers, air filters, motors, fans, blowers, conditioning equipment, ventilators (room and industrial types), unit heaters, etc.
- The AIR CONDITIONING Group:**
Equipment which circulates and filters the air, in summer dehumidifies and cools; in winter heats and humidifies, and does all these in proper season for complete, all year round air conditioning.
- The CONTROL Group:**
Instruments of precision for indicating, controlling or recording temperature, pressure, volume, time, flow, draft or any other function to be measured.
- The REFRIGERATING Group:**
Compressors, condensers, cooling apparatus, contingent apparatus and refrigerants.
- The CENTRAL HEATING Group:**
Apparatus and materials especially

designed or adapted to the uses of central heating and central heating station supplies.

- The INSULATING Group:**
Structural insulators (refractory and cellulose materials), asbestos, magnesia clays and combinations thereof, pipe and conduit covering, etc., weather-stripping, etc.
- The MISCELLANEOUS Group:**
Electric Heaters, boiler and pipe repair alloys, liquids and compounds, and equipment not specifically included in the above groups, but related thereto.
- The MACHINERY AND GENERAL EQUIPMENT Group.**
- BOOKS AND PUBLICATIONS.**

VISITOR ATTENDANCE

Comprises a registered attendance invited to the exposition and includes:
(Figures are 1936 analysis)

INDUSTRIES

Governmental	404
Distributional Channels	
Contractors, Dealers, Jobbers, Supply Houses, 32 classifications	7701
Home Owners	474
Industrial Users, 49 classifications	10,791
Professional and Service Organizations, 23 classifications	2095
Public Utilities	1459
Real Estate Management and Operation, 10 classifications	1418
Educational Institutions	1935
Miscellaneous	1460
TOTAL	27,743

OCCUPATIONS

Executive (44 titles)	12,437
Construction (16 titles and trades)	2606
Operation (44 titles and trades)	4316
Technical (64 titles)	4477
Not Classified including Educators, Publishers, Home Owners, etc.	3907
TOTAL	27,743

The registered attendance at the 1938 Exposition in New York was over 30,000, but the analysis of industries and occupations has not been completed at the time this goes to press.

Industrial Expositions in America lead the expositions of the world in style, business effectiveness, industrial influence and educational value. This Exposition stands among the leaders in Industrial Expositions in America. It is an educational institution which biennially brings together the research developments and improvements in equipment and materials for use in heating, ventilating and air conditioning all types of buildings.